DCCUMENT RESUME

ED 141 393 TM 006 341

AUTHOR Luft, Max; And Cthers
TITLE Development of a Test Instrument to Determine Language Dominance of Primary Students: Test of Language Dominance (TOLD).
INSTITUTION Southwest Research Associates, Albuquerque, N. Mex.
PUB DATE Mar 77
NOTE 12p.; Paper presented at the Annual Meeting of the American Educational Research Association (61st, New York, New York, April 4-8, 1977)

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS Bilingualism; *Bilingual Students; *Elementary School Students; Expressive Language; *Language Fluency; *Language Tests; Primary Education; Receptive Language; Second Languages; *Test Construction; Test Reliability; Test Validity
IDENTIFIERS *Test of Language Dominance (TOLD)

ABSTRACT

The objective of this study was to develop a highly reliable instrument for primary grade students which was relatively culture free and could accurately identify each child's dominant language. In addition, it should provide normative data regarding the child's fluency in his two most predominant languages. This test, known as the Test of Language Dominance, was simultaneously developed in English, Navajo, Spanish, Yupik and Zuni. Items which did not indicate satisfactory statistical rigor during the pilot test phase were removed or modified. The test is divided into Part I (receptive verbal ability) and Part II (expressive verbal ability). Part I, which features progressive item difficulty, is group-administered to children who respond by marking one picture out of the four which the administrator describes. Part II is individually administered with each student naming as many things as he can in a given domain in one minute. The test must be administered by a person fluent in both of the languages being assessed. Standardized directions are provided; and scoring is objective and extremely simple. In pilot testing, run with over 1000 students, test reliability was .75 in English and .94 in other languages. The validated version of the TOLD has now been translated into 15 additional languages. (MV)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

SOUTHWEST RESEARCH ASSOCIATES
a consortium for educational advancement

Post Office Box 4092
Albuquerque, N.M. 87106
(505) 266-5781

ED141393

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

DEVELOPMENT OF A TEST INSTRUMENT TO DETERMINE LANGUAGE DOMINANCE OF PRIMARY STUDENTS

TEST OF LANGUAGE DOMINANCE

(TOLD)

By

Southwest Research Associates
Albuquerque, New Mexico

PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL HAS BEEN GRANTED BY
Southwest Research Associates
TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE NATIONAL INSTITUTE OF EDUCATION. FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER.

March, 1977
AERA Session No. 8.06

Copyright © 1977 by Southwest Research Associates, Albuquerque, New Mexico. All rights reserved. No part of this document may be copied, reproduced or entered into a data retrieval system without written permission from Southwest Research Associates.

TM006 341

Objective of the Test

The objective of this study was to develop a highly reliable instrument for students in the primary grades that was relatively culture free and which could (1) accurately identify the dominant language of the child, and (2) provide normative data regarding the fluency of the child in his two most predominant languages.

As stated in the Task Force Findings Specifying Remedies Available for Eliminating Past Educational Practices Ruled Unlawful under LAU v. NICHOLS, after identification of the student's primary or home language, the district must assess the "degree of linguistic function or ability of the student(s)." Five specific categories were identified by the task force, and include:

A. Monolingual speaker of the language other than English (speaks the language other than English exclusively);

B. Predominantly speaks the language other than English (speaks mostly the language other than English, but speaks some English);

C. Bilingual (speaks both the language other than English and English with equal ease);

D. Predominantly speaks English (speaks mostly English, but some of the language other than English);

E. Monolingual speaker of English (speaks English exclusively).

The Test of Language Dominance (TOLD) was developed as an instrument which could serve as a general tool as well as specifically meet the LAU demands. From several years experience in the evolution of bilingual education programs the need is apparent for a generalized instrument to simultaneously serve in the area.

Theoretical Framework

To develop a test where items are presented in two languages represents a difficult problem. If half the items are presented in one language and the other half of the items in a second language, then both sets of items must be of equal difficulty to equate student results. To overcome this problem, it was determined to present each item in both languages. Half of the items would be presented first in English and the other half in the non-English language first.

Three types of items were initially selected for presentation. A set of vocabulary items, prepositions, and comparative terms

was identified which was common to many cultures. These items composed the identification section of the test, with responses presented in a multiple choice format. The second section is word naming, where a topic is presented to the students and they are given one minute to name as many related words as possible. The third section in the initial version dealt with word association. Here students were to name words associated with general areas or concepts. After pilot testing this section was removed.

Items were selected to represent several areas in which the student functions. These included school, home, and relationships with self and peers. Theoretical basis for selection of these areas and these types of items is in great evidence.

Testing Method

The test was simultaneously developed in six languages: English, Navajo, Spanish, Ute, Yupik, and Zuni. Final Test development resulted from an initial pilot test phase, followed by instrument revision and then construction of the final version. Items which did not indicate satisfactory statistical rigor in any of the six languages during the pilot test phase were removed or modified.

The test is divided into Parts I and II (Word Meaning and Word Naming). Part I measures the passive understanding of Word Meaning (receptive verbal ability). Part II measures active skills in Word Naming (expressive verbal ability).

The desirable feature of progressive difficulty is incorporated by making the items in Part I (Word Meaning) successively more difficult. In comparing facility in two languages, it was essential to use each item in both languages. To offset the test bias of using an item first in one language and later in the other, half of the items are presented first in English and the other half of the items are presented first in the other language.

Part I (Word Meaning) is administered to a group of children who respond by marking the one picture, out of four possibilities, which the administrator describes. Part II (Word Naming) is individually administered. The student is asked to name as many things as he can in a given domain in one minute. Care must be taken during the test administration to assure that all tests are administered in exactly the same way.

A test booklet with pictures is used in Part I. The administrator reads each item in Part I. The pupils are expected to respond by marking the correct picture in the booklet with an "X".

In Part II, the administrator reads the instructions to individual pupils and records the number of words named.

If younger children cannot take an entire test, it should be given in sections rather than at one sitting. All children, however, should be given the test in the same way.

The administrator should be proficient in both languages used in the test and thoroughly acquainted with the test before giving it.

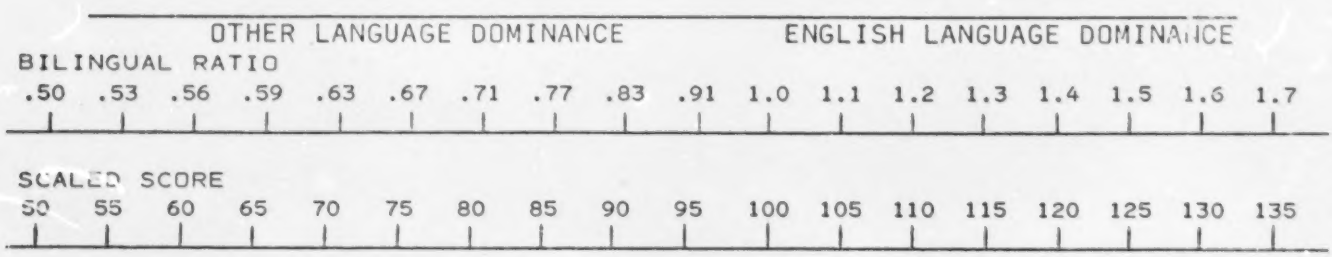
Norming and Reporting of Scores

Pilot testing was done over a two year period on over 1000 students in the Southwestern United States and Alaska. Data for the pilot test were gathered and analyzed, and on the basis of those results substantial changes were made. The final test validation was comprised of 1022 students who spoke English, Ute, Navajo, Spanish, Yupik, or Zuni. Data were also obtained on students' age, participation in bilingual programs, and number of years in school.

The test yields six test scores for each student including

Expressive English
Expressive Other Language
Receptive English
Receptive Other Language
Total English
Total Other Language

Additionally, scores may be obtained for students in each of the domains (home, school, self and peer relations). Obtained scores were converted to a scale score initially by dividing the English score by the other score.



After three years of reporting this "bilingual ratio", the calculation process was modified to allow more viable representation where a great difference between English and other scores exists. A modification of Fishman's bilingual index calculation is currently being used, and is calculated as follows:

$$\left(\frac{\frac{E - O}{\text{larger of } E \text{ or } O}}{2} - 1 \right) \times 100$$

This type of score allows a bilingual ratio varying from 0 to 100. For initial purposes, the following ranges have been established:

0-20 Functional Other Only

21-40 Mostly Other

41-60 Equally Proficient

61-80 Mostly English

81-100 Functional English Only

Percentile equivalent scores may be obtained from the following chart. It should be noted that this is a result of scores for Kindergarten through third graders. Separate percentile tables for each grade are available.

FREQUENCY DISTRIBUTION AND PERCENTILES

ENGLISH			OTHER LANGUAGE		
SCORE	PERCENTILE	FREQUENCY	SCORE	PERCENTILE	FREQUENCY
0	0.02	18	0	0.03	33
12	0.02	1	1	0.04	5
13	0.02	2	2	0.04	1
14	0.03	5	3	0.05	13
15	0.03	4	4	0.07	15
16	0.04	10	5	0.08	10
17	0.05	6	6	0.08	5
18	0.06	11	7	0.09	7
19	0.07	19	8	0.09	5
20	0.11	35	9	0.10	9
21	0.15	42	10	0.11	5
22	0.21	58	11	0.12	18
23	0.30	95	12	0.14	14
24	0.43	134	13	0.15	16
25	0.67	245	14	0.17	22
26	1.00	33	15	0.19	13
			16	0.21	22
			17	0.24	26
			18	0.27	35
			19	0.29	21
			20	0.33	42
			21	0.38	48
			22	0.44	64
			23	0.54	99
			24	0.67	133
			25	0.83	167
			26	1.00	169

The test must be administered by a person fluent in both of the languages being assessed. Standardized directions for establishing rapport, material distribution and test presentation are provided. Scoring is objective and extremely simple. Answer keys are available for Part I, and tallying of answers is all that is required for Part II.

Interpretation of test results can be made by either teaching staff or parental groups. Additional analysis of scores and the development of local norms are options of the school district.

PERCENT OF STUDENTS OBTAINING CORRECT ITEM

ITEM NUMBER	IN OTHER LANGUAGE	IN ENGLISH
1	94	100
2	86	100
3	93	100
4	84	99
5	89	99
6	86	97
7	88	94
8	87	98
9	90	99
10	83	97
11	80	96
12	87	99
13	86	94
14	87	91
15	79	99
16	72	77
17	71	83
18	50	74
19	72	90
20	75	88
21	81	98
22	79	93
23	83	98
24	74	91
25	68	87
26	51	69

Statements of Reliability and Validity

Statement Concerning Validity.

In developing the pilot test model, items were first selected from a wide variety of previously researched data. Heavy reliance was made upon Fishman and others. An item analysis was then performed to select and screen discriminating items. Unfortunately, the pilot test model was presented to students in a higher age group than the initially developed questions, thus resulting in a high percentage of students correctly answering the items. This is revealed in the table on the following page.

Items were analyzed in both languages; thus the same item could be examined as responded to in English and the other language. From an examination of this analysis it was summarized that test items, although in different languages, were measuring parallel constructs.

The decision to divide the responses into two sections, receptive and expressive skills, was based on several linguistic findings. That is, since each test part reflects differing abilities, the two scores are reported separately. Similarly, domain socres are also readily available as separate measurement as each reflects students' language proficiency in differing domains.

Statement Concerning Reliability.

The chart on the following page relates scores of each of the five language groups tested for the first part of the test (perceptive skills). The pilot test version was administered to students in grades K-3. Second and third grade students reportedly "topped" out on the instrument. A second version is being prepared for second through fifth graders. Of special note is the difference between items presented in English and the other languages as far as mean correct responses, standard deviation, and KR-20 reliability. This is revealed in the chart on page eight.

Additionally, test-retest reliability was calculated for total English and total other scores. For all 1022 participants the total English test-retest reliability was .84 over a six month period. For all 1022 participants the total other language test-retest reliability was .92 over a six month period.

Reliability also was calculated between the expressive and receptive parts of the test. For all 1022 participants the reliability between parts in English was .92, compared with .95 in the other language.

SUMMARY OF RECEPTIVE SKILLS DATA

TWENTY-SIX ITEMS PRESENTED IN ENGLISH

	TOTAL	NAVAJO	SPANISH	UTE	YUPIK	ZUNI
MEAN	24.05	23.89	25.15	25.21	24.14	23.43
VARIANCE	5.79	6.40	3.54	1.18	4.87	6.75
STANDARD DEVIATION	2.41	2.53	1.88	1.08	2.21	2.50
RELIABILITY (KR-20)	.75	.76	.82	.54	.72	.74
STANDARD ERROR	1.21	1.24	.80	.74	1.17	1.32
NUMBER OF RESPONDENTS	1022	459	96	19	317	131

TWENTY-SIX ITEMS PRESENTED IN SECOND LANGUAGE

	TOTAL	NAVAJO	SPANISH	UTE	YUPIK	ZUNI
MEAN	20.67	20.61	11.10	22.68	21.94	24.55
VARIANCE	40.35	41.58	66.85	16.23	11.29	4.53
STANDARD DEVIATION	6.35	6.45	8.18	4.03	3.36	2.13
RELIABILITY (KR-20)	.94	.94	.96	.88	.79	.78
STANDARD ERROR	1.57	1.57	1.71	1.42	1.55	.99
NUMBER OF RESPONDENTS	1022	459	96	19	317	131

Summary Statement

The objective of this study was to develop a highly reliable instrument for students in the primary grades which was relatively culture free and which would accurately identify the dominant language of the child, and would provide normative data regarding the fluency of the child in his two most predominant languages. The test was simultaneously developed in English, Navajo, Spanish, Yup'ik, and Zuni. The Test of Language Dominance is designed so that the identification section may be given in a group or individual testing situation; the word naming section is individually administered. Test reliability was .75 in English and .94 in other languages for over 1000 participating students.

The validated version of the TOLD has been translated to the following languages.

Ahtna
Cambodian
Central Yup'ik
Ilokano
Inupiaq
Keresan
Koyukon
Kutchin
Navajo
Siberian Yup'ik
Spanish
Sugpiaq Aleut
Tagalog
Tewa
Tiwa
Tsimsian
Upper Tanana
Ute Mountain Ute
Vietnamese
Zuni